Remarks

The Examiner has rejected Applicant's claims under U.S.C. §103 as obvious in view of de Keyzer et al. (WO 02/057386, hereinafter "de Keyzer"). The Examiner bases the rejections on the argument that the characteristics of the claimed invention are obvious in light of the teachings and disclosures of de Keyzer. Specifically, the Examiner states "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties." The Examiner bases her opinion on the fact that de Keyzer discloses and teaches compounds where the coupling efficiencies of the polymers are in the range of 81% to 87% and Applicant's invention discloses polymers having a coupling efficiency of 63% to 80%. The Examiner claims that these ranges are close enough to make Applicant's invention obvious in view of de Keyzer.

Applicant respectfully disagrees that these two ranges are close enough that one skilled in the art would have "expected [the compounds] to have the same properties." Indeed, one skilled in the art would not expect these compounds to have the same properties, and, in fact, the compounds do not have the same properties; thus, Applicant's compounds are new, novel, and non-obvious.

The impetus for invention leading to Applicant's present invention is the need to have a hot-melt adhesive with an improved hot-melt stability. Hot-melt adhesives, by their very nature, must be able to perform adequately at very high temperatures. Otherwise, the adhesive will either fail to adhere, degrade, or otherwise not perform sufficiently as an adhesive. Those skilled

in the art can appreciate that no one wants tape, glue, or package sealer that fails. Part of the desired characteristics for these particular hot-melt adhesives is the characteristic of having a viscosity that varies only about 5% below its initial value over a period of 24 hours at 177 degrees. This specific, beneficial characteristic can only be achieved by using polymers that have a specific microstructure that yields the specific final products. As detailed in the specification, de Keyzer does not teach products that have the desired viscosity characteristics. Specifically, de Keyzer does not teach adhesives that have coupling efficiencies between 63% and 80% or decreases in viscosity of less than 5% over 24 hours at 177 degrees.

As detailed in the previous Response, the present invention shows the failure of de Keyzer to predict (render obvious) the present invention. Indeed, Example B in the present invention (see Table 2) is a compound manufactured according to de Keyzer. As it is made according to the teachings of de Keyzer, it fails the viscosity requirement of the present invention. (See Tables 2 and 4, Comp B in the present invention and compare with Example E (Table 2) of de Keyzer; these are the same composition.) The change in viscosity for this compound (a compound according to the prior art, de Keyzer,) was way beyond the 5% maximum required by the present invention. Indeed, compound B's viscosity changed so much that it gelled and its viscosity was impossible to measure. Because the coupling efficiency of de Keyzer exceeds the coupling efficiency of the present invention (even by a small amount), the compounds made according to de Keyzer fail the viscosity requirement; they are outside the scope of the present invention.

The Examiner argues that the molecular weights of the compounds taught by de Keyzer span a wide range which includes the molecular weight requirements for the compounds of the present invention. This is true and Applicant does not dispute that the molecular weight range recited by de Keyzer includes the molecular weight range disclosed by Applicant's invention. However, as detailed herein and in previous Responses, the molecular weight characteristic of the compounds suitable for use in the present invention is a much smaller range of molecular weights, and is only one requirement (limitation) of the present invention. It should be noted that the polymers with molecular weights outside of the present invention's narrow range are not acceptable and will not work in the present invention even though they are acceptable and will work in the compounds of the de Keyzer reference.

The Examiner bases her rejections on §103 and cites as supporting authority *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). In the Titanium case, the Court held that the titanium alloy sought to be patented was obvious in view of a Russian publication. The Court held that "The proportions are so close that prima facie one skilled in the art would have expected them to have the same properties." *Id.* at 783. However, the Court came to this conclusion because, in fact, the properties of the titanium alloy were the same as the alloys taught in the Russian publication. Indeed, the Court continued stating "Appellee produced no evidence to rebut that prima facie case. The specific alloy of claim 3 must therefore be considered to have been obvious from known alloys." *Id.*

As discussed, the properties of Applican't invented compounds are not the same as the properties of the compounds disclosed and taught in de Keyzer. Specifically, the viscosity

characteristics are significantly different. As such, the holding of the Titanium case would not apply to the present case; the evidence of differing properties rebuts the presumption that the compounds are obvious. The independent claims of Applicant's invention call for a molecular weight which is less than that of de Keyzer, call for viscosities which vary only within plus or minus 5% after 24 hours (whereas the de Keyzer viscosities have gelled to the extent that they are unmeasurable, or greatly exceed 5%), and require that the coupling efficiency of polymer be in a lesser range. These differences in the requirements of the claims yield compounds which have different properties that those found in the prior art. As such, the analysis of the Titanium case does not apply, and the present invention is not obvious in view of de Keyzer.

Note that de Keyzer has open ended claims ("comprising") while the present invention is closed by the limiting language "consisting essentially of."

Conclusion

In view of the amendments to the claims, and in view of the remarks, it is submitted that the present application is now in condition for allowance, and such is earnestly solicited.

Respectfully submitted,

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